

IRAQ WAR MORBIDITY STUDY: US MILITARY FATALITIES

OVERVIEW

- 1) The tables and graphs are generated automatically to provide a consistent treatment of the historical record. The numbers will bounce around for various reasons. One reason is that it can take several days or more for the record at www.icasualties.org to get set straight and corrections to dates in the distant past can occur. Another reason is that the model parameters are constantly updated. The latter does not make much difference but does account for some minor differences in estimates; even those computed a day apart. These estimates are only meant to provide a basis for comparison.
- 2) Some tables show differences between model estimates and actual outcomes. *There should be differences* and some can be quite large. The open question is always whether or not they are meaningful differences or untimely variations. The differences shown are clues and indications to aid research and analytic efforts. These statistical indications must be considered along with other historical facts.
- 3) Any assumption underlying an estimate is explicitly noted. At this time, the *only* assumption is that calendar year 2007 US military fatalities in Operation Iraqi Freedom will be 1,000 or less. The rationale is that more than 1,000 fatalities in 2007 are politically unacceptable. That rationale and assumption may well be wrong. The annual fatalities in each of the prior three calendar years all fall near 840. The new strategy and security plan commenced in March of 2007. Fatalities have gone up.

Estimate Changed
1,200 on 6/29/07
1,150 on 10/02/07
960 with 9/20/07
surge end on
11/15/07
- 4) This study was originally initiated to see if it were possible to reliably tell whether the intensity of the conflict was increasing or decreasing. "Prediction" was not the goal. To the extent that the models predict, it just means that nothing much has changed about the ongoing course of the conflict.
- 5) Research did not begin with a theory to test and prove. The patterns reflected in these models were detected by statistically analyzing the fatality record. Plausible explanations for the regularity were sought once it was clear that there was something that required an explanation.
- 6) The theory underlying the models is simple. People, groups, organizations and nations have regularly occurring patterns of behavior. The regularity may be due to cycles in nature, e.g., the weather, or institutional cycles based on the calendar, e.g., the electoral cycle. A checking account balance is a good example of this kind of regularity. Many deposits and withdrawals occur at the same time each month. Utility bills tend to be seasonally higher and lower. If too much is spent during one period, less tends to be spent during the following days. These patterns leave a trace in the record.
- 7) The US national electoral cycle turned out to be very significant. Odd years are distinctly different than even years and loss patterns around national elections are atypical. As a result, the model that gives the best indication of fundamental changes in the conflict is based on a two year moving average of daily fatalities. This eliminates the effects of average historical ups and downs that are related to the biannual cycle as well as all shorter cycles within a two-year period.
- 8) It turns out that political scientists like Michael Koch and Scott Gartner have done prior research on the sensitivity of voters to war casualties. (For example: [Koch, Michael and Scott Sigmund Gartner, 2005. "Casualties and Constituencies: Democratic Accountability, Electoral Institutions and Costly Conflicts." *The Journal of Conflict Resolution*, 49\(6\): 874-894.](#))
- 9) The models employed reflect the basic theory and accommodate the particular statistical characteristics of the fatality record and unpredictable timing of specific fatalities. The exact models and methods employed are tedious to explain and involve moderately advanced statistical techniques. Similar models are used in [insurance](#) to address phenomenon like automobile fatalities. [Military planners and generals](#) use models and statistics and have done so for [at least 2,500 years](#).

—Corbett Williams, 5/29/2007

